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1984

PARLIAMENT OF TASMANIA

DEPARTMENT OF MAIN ROADS

REPORT FOR YEAR 1982-83

AUSTRALIAN ROAD
RESEARCH BOARD

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DEPARTMENT OF MAIN ROADS

SEVENTH ANNUAL REPORT

For the year ended 30 June 1983

TABLE OF CONTENTS

	<i>Page</i>
LIST OF PRINCIPAL OFFICERS	5
FOREWORD	7
FINANCE	
General	7
Commonwealth Grants for Roads	10
Special Commonwealth Funds	10
Road Funds from State Resources	10
Funds Provided by Other Departments and Authorities	11
Statement of Source and Application of Funds	11
State Highways Trust Fund	12
Loan Fund Expenditure	12
Financial Assistance to Local Government Authorities	13
PLANNING AND DESIGN	
Project Planning	13
Road Design	15
Bridge Design	16
Road Needs	17
Traffic Services	17
Right-of-Way Control	18
Launceston Flood Protection Scheme	19
Marine Board Works	19
Hydraulics	19
CONSTRUCTION, MAINTENANCE AND OPERATIONS	
Major Works Completed	20
Major Works in Progress	22
Road Maintenance	24
Bituminous Surfacing	24
Bridge Maintenance	24
Jetties, Slipways and Fishing Facilities	25
Investigations and Materials Testing	26
Landscaping	26
CONSTRUCTION PLANT AND WORKSHOPS	
General	26
Plant Operations	26
Apprentices	27
Depots and Workshops	27
Financial Statements	27

	<i>Page</i>
ADMINISTRATION	
General	27
Staff	28
Study Courses and Staff Development Programme	29
Industrial	29
Workers' Compensation	30
Industrial Safety	30
Rehabilitation	30
Property Acquisitions	30
Contracts	31
Agreements	32
Stores	32
ACKNOWLEDGEMENT	32
ANNEXURES	
A — LOAN FUND EXPENDITURE 1982-83	33
B — FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES	33
C — BITUMINOUS SURFACING COMPLETED 1982-83 (km)	34
D — ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1982-83	35

DEPARTMENT OF MAIN ROADS

Acting Director of Main Roads — L. J. BAILY

Acting Assistant Director — D. A. WHARMBY

Secretary — K. G. RASMUSSEN

PRINCIPAL OFFICERS — HEAD OFFICE

Principal Engineer, Design — Vacant

Principal Engineer, Construction — D. A. WHARMBY

Division Engineer, Road Design — W. D. COOMBS

Acting Division Engineer, Road Construction — E. J. BARRENGER

Division Engineer, Bridges — I. A. GAGGIN

Division Engineer, Plant — T. C. FLETCHER

Assistant Secretary — R. F. READ

Chief Accountant — F. J. DRAKE

PRINCIPAL OFFICERS — DISTRICTS

District Engineer, South-East, Derwent Park — M. G. LINTON

Executive Officer — G. S. GRIGGS

District Engineer, North-East, Launceston — P. A. MEYER

Executive Officer — R. A. PETERS

Acting District Engineer, North-West, Ulverstone — A. J. CALLAWAY

Executive Officer — C. J. MORGAN

DEPARTMENT OF MAIN ROADS

ANNUAL REPORT FOR 1982-83

FOREWORD

The financial year 1982-83 may well come to be recognised as the start of one of the most significant changes to the Department in more than forty years. Since the end of World War II, the building of roads and bridges for the classified road network has, with few exceptions, been carried out by the Department's own day labour workforce.

The few works that have been constructed by contract resulted from the day labour force being overloaded or the project was of a magnitude that required special resources and expertise.

During 1982-83 the Department commenced to feel the real impact of contract construction requirements for National Highways under the Commonwealth Road Grants Act 1981 and the Roads Grants Amendment Act 1982. Contract construction requirements were again expanded with the advent of the Australian Bicentennial Road Development Trust Fund Act 1982 which called for arterial roads funded from this Act also to be carried out by contract.

The sudden increase in contract construction required significant changes within the Department to cater for documentation, preparation of specifications and more detailed presentation of plans. Because of the reduced staffing levels, greater use was made of consultants which was undoubtedly of benefit as their industry had been severely depressed.

The full effects of the Australian Bicentennial Road Development funds will not be felt until 1983-84 when the fuel levy will rise to 2 cents per litre. However, the experiences gained have been beneficial and I am confident that the Department will be able to cope with an even greater work load of contract construction in 1983-84 by a judicious use of the Department's professional staff and consultants.

FINANCE

GENERAL

The Department has continued to monitor the rising cost of its operations by the use of a Road System Price Index.

During 1982-83 the Department's index rose at a lower rate than the Consumer Price Index. This is only the fourth time in thirteen years that the rate of increase has been less than the Consumer Price Increase. The total increase in the Road System Index over the thirteen years remains greater than the total increase in the Consumer Price Index.

The Road System Price Index rose by 6.9 per cent during 1982-83 while the Consumer Price Index increased by 11.0 per cent. Over the same period the weighted average wage paid to adult males working in the building and construction industry in Tasmania, as reported by the Australian Bureau of Statistics, rose by 4.2 per cent.

The comparison between the index developed by the Department and the Consumer Price Index adjusted to the same base year is set out below —

<i>Date 30 June</i>	<i>D.M.R. Road Index</i>		<i>Consumer Price Index</i>	
	<i>Index No.</i>	<i>Annual Change</i>	<i>Index No.</i>	<i>Annual Change</i>
		<i>%</i>		<i>%</i>
1970	100.0		100.0	
1971	110.8	10.8	104.6	4.6
1972	122.0	10.1	111.3	6.4
1973	133.8	9.7	119.3	7.2
1974	162.4	21.4	136.8	14.7
1975	199.3	22.7	159.3	16.4
1976	233.6	17.2	183.0	14.9
1977	263.5	12.8	206.8	13.0
1978	283.3	7.5	224.0	8.3
1979	300.6	6.1	243.6	8.8
1980	337.6	12.3	268.3	10.1
1981	374.1	10.8	292.1	8.9
1982	421.9	12.8	321.0	9.9
1983	451.0	6.9	356.3	11.00

The rate of inflation affecting the operations of the Department of Main Roads for the financial year 1983–84 is currently estimated to be 10 per cent per annum. Commonwealth Grants available to the Department for road purposes under the Roads Grants Act were indexed by 7.48 per cent for 1979–80, 11.15 per cent for 1980–81, 8.7 per cent for 1981–82 and 7.15 per cent for 1982–83. The increase for 1983–84 is 6 per cent.

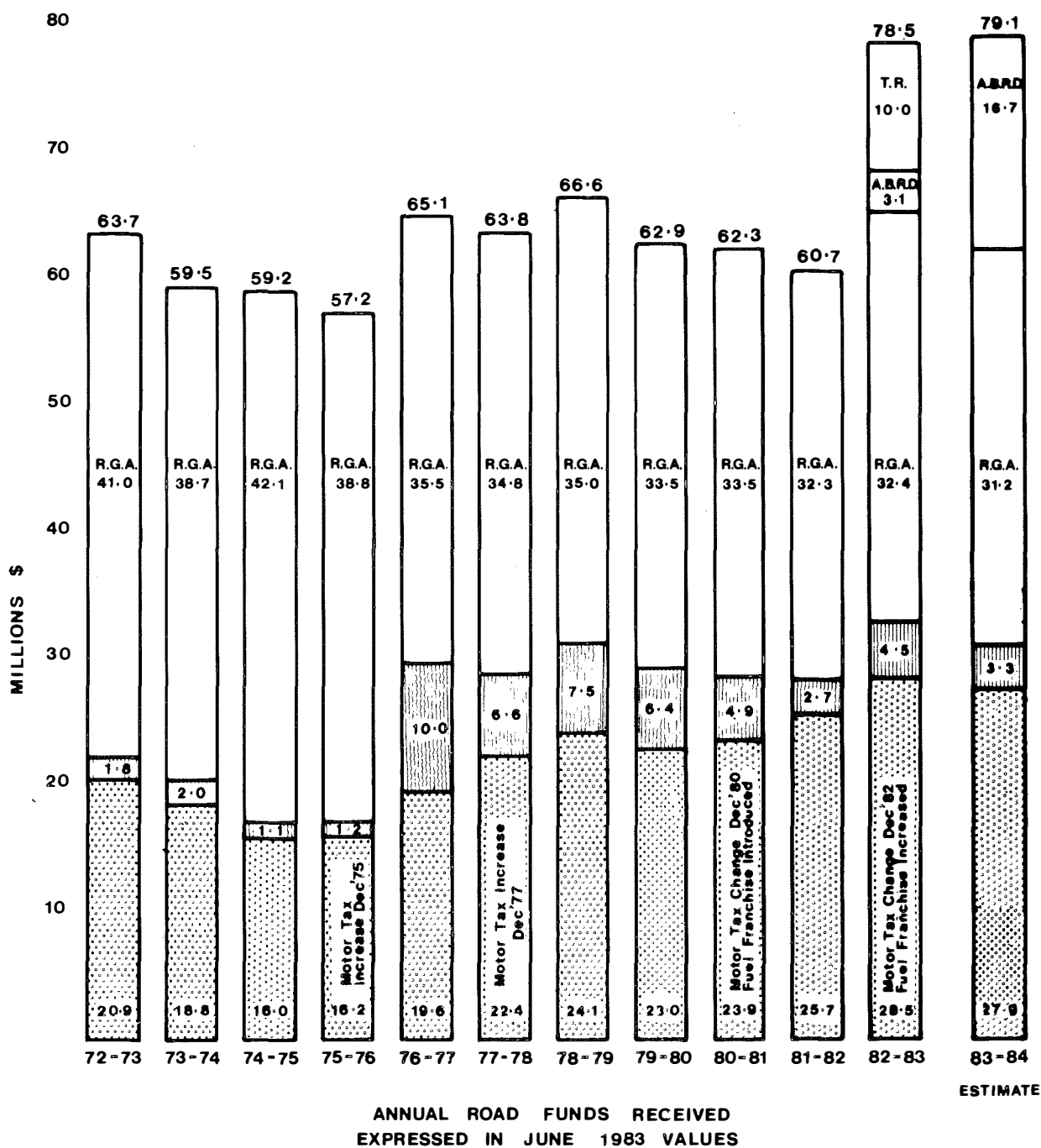
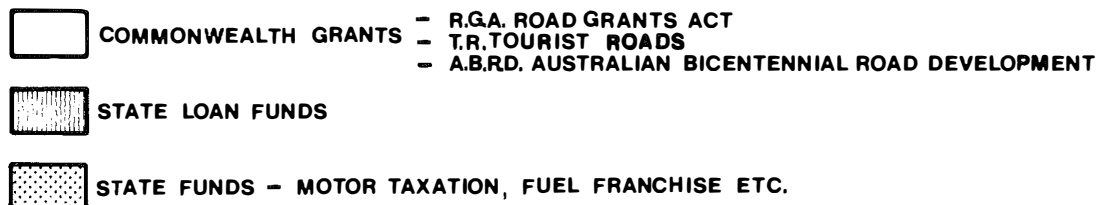
The bar chart opposite illustrates the funds received by the Department for roadworks. In each case the funds have been adjusted to June 1983 values by using the Department's road system price index.

The sensitivity of State funds to rises in motor taxation rates and fuel franchise is clearly visible.

In recent years, Commonwealth funds granted under the Roads Grants Act, as amended, have declined in real terms. However, the decline has been partly arrested by a once only special grant of \$10 m for Tourist Roads under the Callaghan Scheme and continuing grants for the Australian Bicentennial Road Development (A.B.R.D.) Programme.

The A.B.R.D. Programme is funded from a special Commonwealth fuel tax based on cents per litre of fuel.

To be eligible for A.B.R.D. funds, Tasmania must maintain its expenditure on roads in real terms each year. The Commonwealth Government has proposed a base period and a method of determining a base level of expenditure against which the State's annual expenditure on roads during the period of the A.B.R.D. Programme will be compared. The base period proposed is a five year period ending 30 June 1982 and the average of the State's annual expenditure on roads for this period its base level expenditure. It is also proposed that the Australian Bureau of Statistics implicit price deflator for private non-dwelling construction be used to adjust expenditure figures for different years to enable them to be compared in constant price terms.



COMMONWEALTH GRANTS FOR ROADS

Under the Roads Grants Act 1981 and the Australian Bicentennial Road Development Trust Fund Act 1982 the Commonwealth provided financial assistance to the States for roads in the financial year 1982-83. The total grants to Tasmania were \$35 525 606, made up as follows:—

	<i>Roads Grants Act 1981</i>	<i>A.B.R.D. Act 1982</i>
	\$	\$
National Roads — Construction and Maintenance	14 988 000	1,586,743*
Arterial Roads — Construction	8 605 000	....
Rural Arterial Roads — Construction	....	128 417
Urban Arterial Roads — Construction	....	832 672
Local Roads — Construction and Maintenance	8 813 000	571 774*
	<u>\$32 406 000</u>	<u>\$3 119 606</u>

*For road construction purposes only.

The 1981 Act discontinued the State Contribution (Quota) System.

Under the Roads Grants Amendment Act 1982 the following allocation of road funds was made in respect of 1983-84:—

	\$
National Roads — Construction and Maintenance	15 887 000
Arterial Roads — Construction	9 121 000
Local Roads — Construction and Maintenance	9 341 000
	<u>\$34 349 000</u>

Under the Australian Bicentennial Road Development Trust Fund Act 1982 Tasmania anticipates receiving approximately \$18 000 000 in 1983-84 made up as follows:—

	\$
National Roads — Construction	6 000 000
Rural Arterial Roads — Construction	3 450 000
Urban Arterial Roads — Construction	5 550 000
Local Roads — Construction	3 000 000
	<u>\$18 000 000</u>

SPECIAL COMMONWEALTH FUNDS

Funds for the construction of the Second Hobart Bridge provided by the Commonwealth amounted to \$16 710 944 as compared with \$16 433 222 in 1981-82.

Further, a special Commonwealth grant of \$10 000 000 was provided in 1982-83 under the Callaghan Plan for works on Tourism Road Development and a total of \$9 024 120 was spent on approved projects during the year.

ROAD FUNDS FROM STATE RESOURCES

Motor Taxation — receipts amounted to \$17 020 946 as compared with \$18 746 178 in 1981-82 a reduction of 9.2 per cent.

Public Vehicle Fees — fees collected during the year amounted to \$109 527 as compared with \$150 154 in 1981-82 a reduction of 27.1 per cent.

Petroleum Products Business Franchise Licence Fees — receipts amounted to \$9 836 840 as compared with \$3 900 221 in 1981-82 an increase of 152.2 per cent which reflects the impact of a full year's collection of fees together with the higher fees charged as from December 1982.

Loan Funds — funds provided to the Department for roads, bridges and associated works, jetties and facilities for fishermen and the Launceston Flood Protection totalled \$4 969 472 an increase of 30.2 per cent as compared with the previous year.

FUNDS PROVIDED BY OTHER DEPARTMENTS AND AUTHORITIES

Payments received by the Department for works and services carried out for other Departments and Authorities amounted to \$4 830 996 as compared with \$2 963 163 in 1981-82. The Department was involved with major road and bridge construction works on the Gordon and Pieman Rivers Power Development schemes and minor works for the Education, Health Services and Transport Departments.

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

As shown in the following statement, the funds obtained during 1982-83 from all sources (including the Special Commonwealth funds for the Second Hobart Bridge project) amounted to \$101 337 824 an increase of 29.5 per cent as compared with 1981-82.

Excluding the funds for the Second Hobart Bridge, the total of funds from all other sources amounted to \$84 904 602 in 1982-83 as compared with \$61 820 069 in 1981-82, an increase of 37.3 per cent which is greater than the rise in the Road Price Index.

SOURCES OF FUNDS

1981-82		1982-83	
\$		\$	\$
	State Highways Trust Fund—		
	(a) State Motor Taxation, Public Vehicle Fees, Fuel Franchise and Miscellaneous		
24 072 212	Receipts	28 519 086	
30 243 000	(b) Commonwealth Grants for Roads	35 525 606	
			64 044 692
3 817 360	Loan Funds .....	.....	4 969 472
16 433 222	Special Commonwealth Funds .....	.....	2 610 944
724 334	Consolidated Revenue Fund .....	.....	781 720
2 963 163	Funds Provided by other Departments and Authorities .....	.....	4 830 996
\$78 253 291	TOTAL .....	....	\$101 337 824

APPLICATION OF FUNDS

1981-82		1982-83	
\$		\$	\$
	State Highways Trust Fund—		
45 927 563	Roadworks	52 335 281	
8 105 249	Bridgeworks	11 922 646	
12 536	Ferries	3 164	
			64 261 091
	Loan Funds —		
2 550 000	Roadworks	1 973 500	
99 988	Jetties and Facilities for Fishermen	238 130	
179 443	Launceston Flood Protection	275 000	
987 929	Bruny Ferry Terminals	2 482 842	
			4 969 472
	Special Commonwealth Funds —		
16 433 222	Second Hobart Bridge	16 710 944	
....	Tourist Road Development Roadworks	9 024 120	
			25 735 064
	Consolidated Revenue Fund —		
440 155	Departmental Administration	443 840	
164 910	Workers' Compensation (Other Departments)	228 360	
74 999	Repairs to Jetties and Facilities for Fishermen	74 982	
44 270	Other Miscellaneous Expenses	34 538	
			781 720
2 963 163	Works for Other Departments and Authorities .....	.....	4 380 996
	Net Increase in Funds carried forward:—		
....	Tourism Road Development Fund	975 880	
269 864	Less State Highways Trust Fund	216 399	
			759 481
\$78 253 291			\$101 337 824

STATE HIGHWAYS TRUST FUND

The State Highways Trust Fund Account is established under the Roads and Jetties Act 1935. The fund is credited with the following moneys:—

- (1) all grants made by the Commonwealth under the Roads Grants Acts and the Australian Bicentennial Road Development Trust Fund;
- (2) all State motor taxation;
- (3) public vehicle fees imposed under section 20A of the Traffic Act 1925;
- (4) contributions by Municipal Councils for the maintenance of classified roads;
- (5) receipts from sale of stores (other than plant);
- (6) any moneys provided by Parliament for the purposes of the fund; and
- (7) such other moneys (if any) as the Treasurer may direct.

The fund is debited with the following:—

- (a) expenses incurred in the construction, reconstruction and maintenance of State highways and other classified roads;
- (b) costs incurred in the maintenance of Council roads which the Minister has agreed to subsidise;
- (c) contributions to the Bruny, Flinders and King Island Municipalities of portion of the Motor Tax collected in those Municipalities;
- (d) all expenditure incurred under the provisions of the Roads Grants Act 1981 and the Australian Bicentennial Road Development Trust Fund Act 1982;
- (e) costs of stores and materials (other than plant); and
- (f) repair and renewal of bridges on Council roads.

A summarised statement of receipts and payments for the State Highways Trust Fund Account for 1982–83 is set out below, together with the corresponding figures for 1981–82 —

STATE HIGHWAYS TRUST FUND 1982–83

1981–82 \$		<i>Receipts</i>	1982–83 \$
374 684	Balance brought forward	.....	644 547
30 243 000	Commonwealth Grants for Roads	.....	35 525 606
18 746 178	Motor Taxation	.....	17 020 946
150 154	Public Vehicle Fees	.....	109 527
3 900 221	Petroleum Products Business Franchise Licence Fees	.....	9 836 840
1 275 659	Miscellaneous Receipts	.....	1 551 773
<u>\$54 689 896</u>	TOTAL	.....	<u>\$64 689 239</u>
<i>Payments</i>			
13 821 616	National Roads	.....	17 438 067
29 744 645	Arterial Roads	.....	32 884 700
10 479 088	Local Roads	.....	13 938 324
644 547	Balance carried forward	.....	428 148
<u>\$54 689 896</u>	TOTAL	.....	<u>\$64 689 239</u>

LOAN FUND EXPENDITURE

The loan funds of \$4 969 472, allocated to the Department for roads and bridges and other works, were applied as follows:—

1981–82 \$		1982–83 \$
2 550 000	Roads and Bridges	1 973 500
1 267 360	Other Works	2 995 972
<u>\$3 817 360</u>	TOTAL	<u>\$4 969 472</u>

A schedule of expenditure items and amounts is shown in Annexure A. It should be noted that the loan fund amounts for the road and bridge items listed in the schedule were in most cases supplemented by funds from the State Highways Trust Fund.

FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

Under the provisions of the Roads Grants Act 1981 and the Roads and Jetties Act 1935 the Department made direct grants to local government authorities based on a formula approach for construction and/or maintenance of roads controlled by Councils. The direct grants to Councils totalled \$10 290 878, an increase of 50.3 per cent over the amount of the direct grants provided in 1981-82.

In addition to the direct grants, the Department also provided indirect financial assistance to local government authorities. Under the provisions of the Roads and Jetties Act, the Department financed the repair and renewal of bridges on Council roads and carried out these bridgeworks. The Department maintained those Council roads which have been declared as subsidised roads and provided funds to the National Parks and Wildlife Service for work on some Council roads. The indirect financial assistance to Councils totalled \$2 590 211, an increase of 17.2 per cent over the preceding year.

The total of direct grants and indirect financial assistance to Councils was \$12 881 089, an increase of 42.2 per cent over 1981-82. The amounts of direct grants and indirect financial assistance to Councils for the various categories of roads and works are shown in Annexure B.

PLANNING AND DESIGN

PROJECT PLANNING

Internal environmental studies are routinely undertaken in formulating plans for major road projects and some are subsequently examined by the Department of the Environment when significant environmental impacts are identified.

Noise from road traffic has been the one important issue which has caused great concern and a number of future projects will incorporate noise control measures.

The level of environmental awareness within the community is still increasing and the standard of future environmental and planning investigations will require increased sophistication.

BASS HIGHWAY

Chasm Creek to Penguin

Preliminary designs have been prepared to enable a comparison to be made of alternatives to either upgrade the existing highway to a four lane divided facility, or to select a new alignment to the south of Sulphur Creek and Preservation Bay. Both options have difficult engineering and social problems and it will be virtually impossible to select a scheme which will be acceptable to all parties involved.

Forth River to Don Hill

All Planning issues east of the Forth River have been resolved and a highway planning report has been approved by the Commonwealth Government. Detailed design is currently being undertaken.

Prospect By-Pass — Prospect Connector

The advent of the Australian Bicentennial Road Programme has accelerated the completion date of the Prospect By-Pass thus raising doubts on the need to proceed with the Prospect Connector. The issue is complex as it affects local traffic distribution as well as National Highway through traffic. Further examination is proceeding.

BELLERIVE BY-PASS

An Environmental Impact Study for this proposal is being undertaken under the supervision of a technical committee from the Clarence Council, the Department of the Environment and the Department of Main Roads. Work has been completed to the stage where a public display could be conducted at short notice and this is expected to take place early next financial year.

BURNETT STREET ENVIRONMENTAL IMPACT STUDY

The Department has been represented on the Working Group overseeing this Study which was completed in March 1983 by Consultants. The Working Group will make its own report on the Study early next financial year.

EAST TAMAR HIGHWAY (DEVELOPMENT ROAD)

A comprehensive study of the existing highway from the Alanvale Connector to George Town has commenced. The study is programmed for completion by December 1983 and will identify those areas where further work is required and their relative priorities.

HOBART SOUTHERN OUTLET — KINGSTON BY-PASS

Planning for an interchange at Kingston commenced some years ago and the construction of the Outlet already carried out incorporates two sections of road which were to form two of the ramps. However, in the light of changes in planning philosophies and fiscal policies a re-examination of the proposal is being undertaken to see if there is a more appropriate or cost-effective scheme. When the design stage is reached, fully detailed contract drawings will have to be produced.

MERSEY MAIN ROAD — RAILTON MAIN ROAD TO SPREYTON

An examination of alternative alignments as part of a proposal to replace the timber bridge across Ballahoo Creek has been made. A line south of the existing road has been approved and detailed design commenced. This design will also extend eastwards to the junction of Railton Main Road and westwards towards Spreyton.

MIDLAND HIGHWAY**Strathroy to Breadalbane**

In January 1983 a Highway Planning Report was completed and submitted for approval to the Federal Department of Transport. The Report recommended a new four lane divided highway, west of the existing highway and including a grade separated interchange at Breadalbane.

Oatlands By-Pass

Discussions with Commonwealth and Local Government officials on the number and arrangement of access from the by-pass into the town continued throughout the year. Sufficient progress was made at these discussions to allow detailed design to commence and property acquisition to be initiated. At the time of writing this report a new connection from the Interlaken Road through the town is being examined.

TASMAN HIGHWAY**Falmouth to Chain of Lagoons**

Planning a coastal road to link Falmouth with Chain of Lagoons on the East Coast commenced during the year. Ground survey was commenced and completed for approximately 15 km. Preliminary design has been undertaken from Falmouth Road junction to Four Mile Creek (length approximately 5.1 km) and from Four Mile Creek to Cray Drop Inn (approximately 2 km).

EXTENSION TO DAVEY STREET

A corridor from the Cenotaph to the Davey/Macquarie one way street couplet has been defined and agreed, in consultation with the Sullivan's Cove Development Authority, the Hobart City Council and the Australian National Railways Commission. Particular reference has been made to landscaping concepts and the preservation of features of historic interest.

ROAD DESIGN**ALGONA MAIN ROAD**

The unexpected inclusion of Algona Main Road for construction by contract in the 1983-84 works programme necessitated the urgent commencement of detail design. The design includes a channelised junction with Roslyn Avenue at the eastern end and a roundabout on the Channel Highway at the western end. First stage construction will be a single carriageway with a short length of overtaking lane but ultimately there will be two carriageways separated by a narrow median.

BASS HIGHWAY**Burnie Stage 'B'**

Detailed design has continued throughout the year with the main emphasis being on production of plans for the North Terrace section and the Wilmot Street Overpass. Designs for the relocation of the railway at West Beach and the service relocations in North Terrace were completed and construction commenced.

Wiltshire Junction to Smithton

This section was listed for design and a preliminary investigation and survey has been done. Design has commenced.

Wynyard to Boat Harbour

All design work between Flowerdale Post Office (Preolenna Road) and Cassidys Bog is now complete.

BRUNY MAIN ROAD

Design for 4 km northwards from the Adventure Bay turn-off has been completed. Investigations of a 1.6 km deviation southwards from the junction with Lennon Main Road is being undertaken.

CHANNEL-HIGHWAY — SNUG TO KETTERING

Design of a further section of this highway 1.3 km long between O'Briens Hill and Oyster Cove was completed.

HOBART SOUTHERN OUTLET**Davey Street to Macquarie Street**

Preliminary design to establish property acquisition boundaries has been completed and most of the affected properties have been acquired. Detailed design has commenced.

Sandfly to Vines Saddle

Detailed design of this road has commenced.

Zomay Avenue to Davey Street

The design for this section and contract documentation has been virtually completed. The design provides for completion of the 4 lane divided facility which was partially constructed in the late 1960's, but which could not be finished for lack of funds since that time.

HUON HIGHWAY — GEEVESTON TO HUONVILLE

All design work on this section of the Huon Highway is now complete except for the section through Franklin.

KELLY BASIN ROAD

Design of the first 6 km of the Kelly Basin Road from its junction with the Lyell Highway has been undertaken for the Hydro-Electric Commission. The construction of this section of the road has also been carried out by this Department.

LAUNCESTON SOUTHERN OUTLET**Mount Pleasant Interchange to Glen Dhu Interchange**

Design has continued on this project throughout the year. The work has been mainly concerned with accommodation works e.g. provision of access to the Supply and Tender Department store in Wellington Street and the alterations necessary to the Launceston City Council streets affected by the scheme.

Strathroy Bridge to Mount Pleasant Interchange

Modifications to the previous design to provide a 4 lane divided carriageway facility are virtually complete, except for the staging arrangements at Strathroy. The staging is dependent on the final scheme south from Strathroy. Advice on this matter has still to be received from the Federal Government.

MIDLAND HIGHWAY**Bridgewater By-Pass**

The design plans have been modified to include the additional detailing required for works that are to be let to competitive tender.

Junction with Norfolk Street at Perth

Design of improvements to this junction were carried out to provide for an anticipated increase in traffic when work on the Longford Deviation of the Illawarra Main Road is completed.

TASMAN HIGHWAY**Scottsdale to Ringarooma Turn-Off**

Design of this section of the Tasman Highway was completed during the year.

BRIDGE DESIGN

The more important designs completed were —

- Extension of Railway Underpass on the Bass Highway at Leith.
- Glen Dhu Overpass on the Southern Outlet Road at Launceston.
- Jordan River Bridge in Andrew Street, Brighton.
- Wilmot Street Overpass on the Burnie Highway Development Stage B.

The more important designs in hand but not completed were —

- Jones Street Underpass on the Burnie Highway Development Stage B.
- Mole Creek Main Road underpass on the proposed Bass Highway at Deloraine.
- North George River Bridge on the Tasman Highway near Pyengana.
- Pipers River Bridge on the Underwood Deviation of the Lilydale Main Road.

ROAD NEEDS

ROAD INVENTORY

The inventory of Municipal Roads was updated for thirty-two municipalities and work continued on the amendment of computer files.

BASS HIGHWAY — WYNYARD TO PORT ROAD

A safe speed survey was carried out as part of an overall safety assessment.

LENNON MAIN ROAD

A safe speed survey was carried out to assess the need for curve advisory speed signs.

WEST TAMAR HIGHWAY — LEGANA TO EXETER

A sight distance and barrier line survey was carried out to provide data for an assessment of the need for passing lanes.

N.A.A.S.R.A. ROADS STUDY

Work continued on the supply and processing of data for this study.

ROAD GEOMETRY SURVEY

Road geometry data collected in 1982 is yet to be processed by the N.A.A.S.R.A. Roads Study Team.

TRAFFIC SERVICES

TRANSPORT STUDIES

The traffic section has commissioned Consultants to carry out a corridor assessment of the south west sector of Launceston. The fieldwork for the Traffic Survey was carried out by Staff members augmented by temporary employees. This assessment is designed to analyse the vehicular use of the Southern Outlet and the possible connections to Westbury Road. In addition the analysis will be used to test the use that will be made of Wellington and High Street/Talbot Road once the first stage of the Southern Outlet in Launceston has been opened to traffic.

TRAFFIC COUNTING

Routine traffic counting has currently been deferred in the North West District, due to lack of staff. Counting, however, has been continued in the North East and Southern Districts. A large number of counts were taken on unclassified roads in the North East, over the Christmas holiday period. These counts were taken to provide data to answer specific points raised by local councils over road expenditure. A new micro-computer has been installed in the Traffic Section in order to handle the volume of data now being collected. This computer is also being used to model the Launceston network and analyse the traffic distribution.

ROAD DIRECTION SIGNING

The installation of the new road direction signing has progressed satisfactorily over the 1982–83 period. Signing in the rural areas has now reached the stage where approximately 90 per cent has been completed, the remaining 10 per cent being signs to be erected on Council roads.

TOURIST SIGNING

The Department is still heavily involved with signing related to tourist traffic and this is arranged under the auspices of the Tourist Signs Advisory Council.

LIMITED ACCESS SIGNS

As more roads which are controlled by the Minister are proclaimed as 'Limited Access' roads, appropriate signs are erected to advise prospective land purchasers that the abutting property may not have access to that road.

This means that before land transactions are undertaken, the prospective purchaser should ascertain from the Department whether the property has been granted a 'licensed access'. Failing this precaution the purchaser may find that access to the land will not be permitted from the Limited Access road.

VEHICLE PERMITS

Two thousand nine hundred and seventy-two permits were issued for the movement of overweight and/or overdimension vehicles during the year. This compares with 3 237 issued during 1981-82.

SCIENTIFIC COMPUTER SECTION

A communications node, consisting of a Prime 250 computer, was installed in the Department in July 1982. It supports sixteen work stations including two micro-computers, and permits users to access the computing facilities of the Transport Department and the State Computer Centre. In addition, any one user may link into the C.S.I.R.O. network. There is reserve capability to allow support of further work-stations or some internal data processing. Established computer systems, such as the road design suite, are better served than ever before.

The Department's current computer aided road design package T.R.I.C.S. (Tasmanian Roads Integrated Computer System) was developed in the early 1970's and essentially automates the traditional traverse, cross-section design method. T.R.I.C.S. predates the advent of survey electronic distance measuring (E.D.M.) equipment, 'cheap' computing power and graphics and automatic plotting machines.

Major changes to or abandonment of T.R.I.C.S. must occur if the benefits now available from the most up-to-date E.D.M. survey, computing equipment and accessories are to be obtained.

The Department proposes to conduct a Pilot Study using the well established M.O.S.S. (Modelling Systems) package initially operated through a Melbourne Computing Bureau for access to the M.O.S.S. software. The M.O.S.S. system was developed in the United Kingdom and has been used successfully by the Highways Department of South Australia for several years. The M.O.S.S. system allows for the 'automatic' recording and plotting of survey data and a fully 'interactive' design process.

The Department has consulted and reached initial agreement with the Public Service Association, the Draftsmen's Association and the Association of Professional Engineers of Australia, whose members will be affected by the changing technology.

RIGHT OF WAY CONTROL

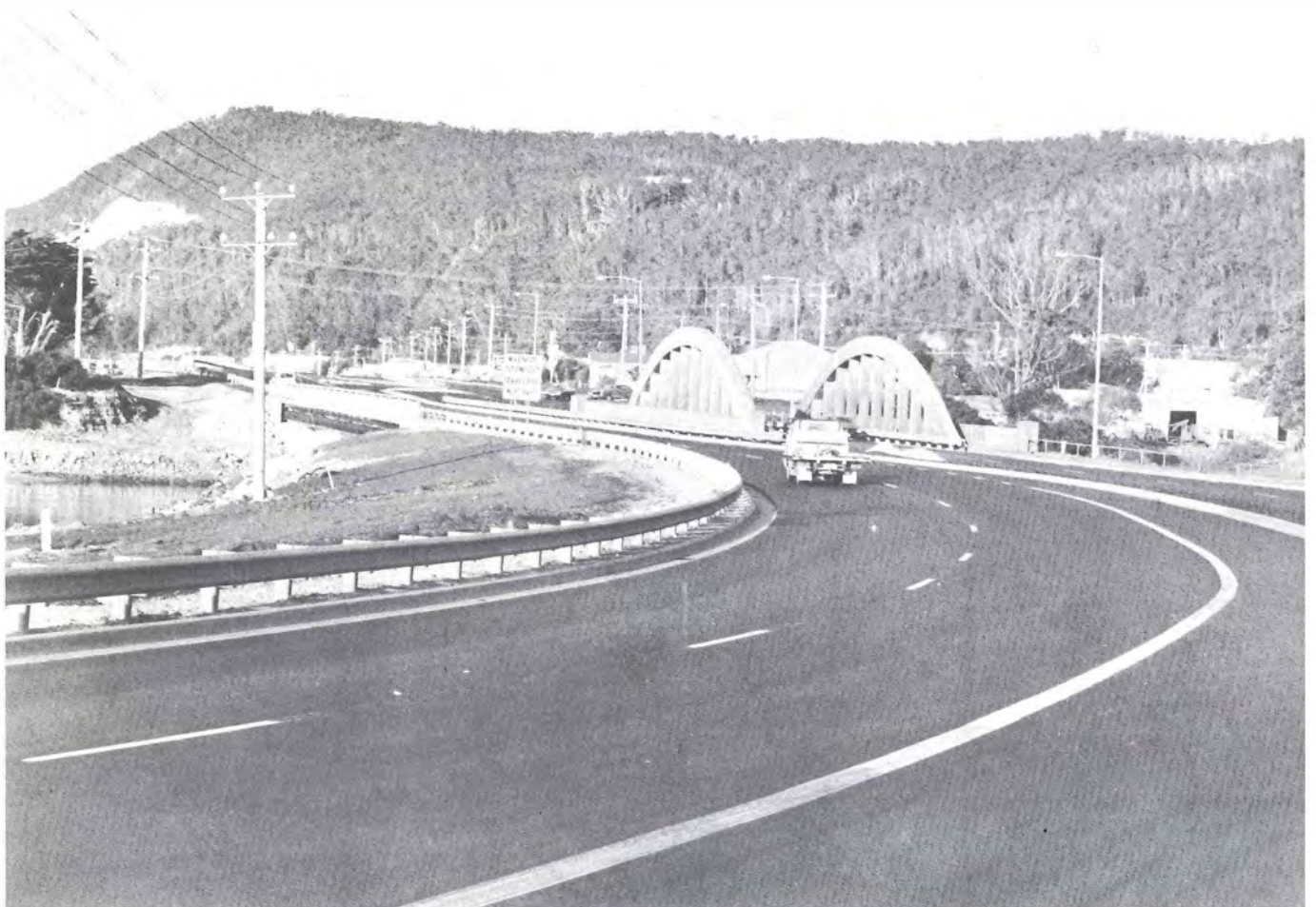
Right of Way Control throughout the year covered a broad spectrum of engineering matters related to the administration, control and protection of the proclaimed State Road System.

There is increasing evidence to indicate that the community is becoming aware of the need to protect the State's main traffic routes from the effect of indiscriminate or uncontrolled developments. In this regard subdivision of abutting land is usually the forerunner of other developmental activities.

The traffic facilities required for properly planned and orderly development can generally be accommodated at reasonable cost to the State. Unco-ordinated subdivision and development can lead to a situation of excessive and unnecessary expenditure of road funds to maintain a safe and efficient arterial road network.



Bass Highway.
Chasm Creek to Old Surrey Road.



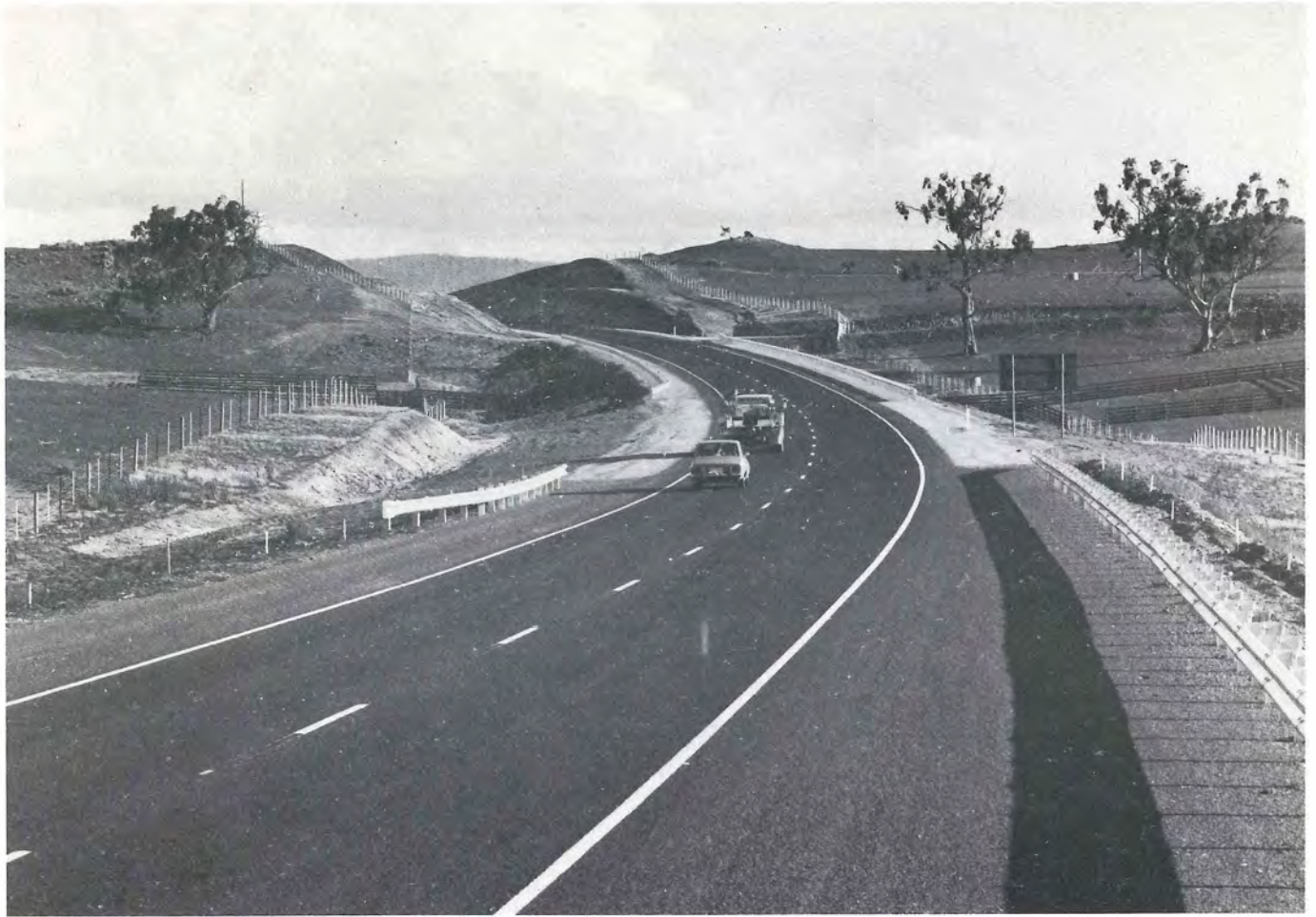
Emu River Bridge on the Bass Highway, Burnie.



Launceston Southern Outlet Road — Construction of Section from Westbury Road to Glen Dhu.



Launceston Southern Outlet Road — Earthworks in progress on Section, Mount Pleasant to Strathroy, with Mount Pleasant Interchange in the Foreground.



Midland Highway — Section of new pavement near Lemon Hill.



Midland Highway — Realignment of Highway at Lemon Hill.
South of Oatlands.



A view of the Bowen Bridge from the western shore. Work is in progress on superstructure assembly at Pier 4.



A superstructure box section is lifted into position at the end of a balanced cantilever on Pier 4 of the Bowen Bridge. Caisson cap skirting units are not yet in place at this pier.

The Right of Way control activities included consideration of matters in the following specific fields:—

(i) Subdivisional and Development matters	307
(ii) Public Utility Service installations on State Roads	219
(iii) Roads and Jetties Act 1935, Proclamation Matters	41
(iv) Dealing with enquiries in relation to Proclaimed Limited Access Roads	27
(v) Matters associated with the updating of access arrangements and the issue of licensed accesses on Limited Roads	135
(vi) Preparation and co-ordination of advice on new or amended Statutory Planning Schemes and Outline Development Plans	6
(vii) General enquiries (Property and Other) concerning the State Road System	196
(viii) Obtaining and providing advice in relation to Crown Land Transactions	202
(ix) Miscellaneous matters	132
TOTAL	1 265

LAUNCESTON FLOOD PROTECTION SCHEME

The Department continued to provide engineering liaison and a check on the expenditure of State funds provided for capital works and the maintenance of the flood protection system being carried out by the Launceston City Council in accordance with the terms of the agreement.

Approximately \$231 000 was expended on actual works during 1982–83 and this amount combined with a carry over from 1981–82 brought the total expenditure for 1982–83 to \$275 000. The main works undertaken were the repair of damage due to settlement and the progressive topping up of the levels to design height. A special submission and report on the State's continuing financial commitment on works associated with this scheme was prepared for Cabinet. Initial investigations were undertaken with a view to having an expert hydraulic examination of the scheme in the vicinity of the Evandale saddle to ascertain if any cost saving is possible in this area.

MARINE BOARD WORKS

PORT OF GRASSY, KING ISLAND

This port is managed by the King Island Marine Board under lease from the State in accordance with the terms of the King Island Port Facilities Agreement Act 1971 — administered by the Treasury.

The Department of Main Roads undertakes engineering oversight of the Port liaising as necessary with the Treasury and the King Island Marine Board.

HYDRAULICS

Hydraulic survey was undertaken on a total length of approximately 70 km of road (including approximately 20 km of National Highways) prior to design for new work or reconstruction including sections of the Midland and Bass Highways and the Launceston Southern Outlet Road.

Detailed hydraulic investigation and drainage design was carried out on sections or junctions of major highways as follows:—

Hobart Southern Outlet, Lyell Highway, Huon Highway, West Tamar Highway, Tasman Highway, Bass Highway (non National Highway section), Lilydale Main Road, Alonga Main Road, Coles Bay Tourist Road.

Approximately one hundred and thirty separate hydraulic investigations (both major and minor) were made for bridges, culverts, and road drainage. Included were works on the majority of highways and main roads as well as on secondary and Council roads; also included were major investigations for the following bridges:—

Willowbrook Bridge over Jordan River, Four Mile Creek Bridge, Crab Tree Rivulet Bridge, St Pauls River Bridge on the Royal George Road and Westmore Bridge.

General hydraulic investigation and design was undertaken on approximately 40 different subjects including subdivision drainage onto roads, flooding problems, road drainage, nuisance investigations, erosion control, irrigation, etc.

CONSTRUCTION, MAINTENANCE AND OPERATIONS

MAJOR WORKS COMPLETED

The following bridgeworks were completed during the year:—

<i>Name</i>	<i>Road</i>	<i>Cost to 30.6.83</i>
		\$
South Esk Flood Opening No. 1	Longford Deviation	917 448
Wivenhoe Rail Underpass	Bass Highway	887 669
South Esk Flood Opening No. 2	Longford Deviation	724 886
Westbury Road Overpass	Westbury Road, Launceston	665 493
Emu River Bridge	Bass Highway	664 282
Hilton Road Overpass	Northern Outlet Road, Hobart	447 282
Mackintosh River Bridge	Murchison Highway	396 248
Mountain River Bridge	Ranelagh Main Road	382 715
Back Creek Bridge	Longford Deviation	351 067
Box Hill Road Overpass	Northern Outlet Road, Hobart	328 000
Factory Creek Culverts	Tasman Highway	260 496
Wandle River Bridge	Waratah Highway	200 132
Weld River Bridge	Tasman Highway	171 940

EMU RIVER BRIDGE

This new three span, 65 metre long bridge has been built as part of the programme to upgrade the Bass Highway to a dual carriageway.

Services have been installed on the bridge by the Burnie Council and only the placing of asphalt on the deck surface and removal of the falsework remains to be completed.

BOX HILL ROAD OVERPASS — NORTHERN OUTLET ROAD HOBART

Abutment instability was detected on this structure in January 1982, and subsequent investigation revealed a slip circle failure at the western abutment. Remedial measures were taken at both abutments and the bridge was successfully restored to a safe condition. The bridge was reopened to traffic in September 1982 having been closed for six months. The cost of the remedial work was \$328 000. Investigations were carried out jointly by two highly experienced consultant groups who considered the problem arose from unusual characteristics in the local soils which are not always detectable by conventional test procedures.

BRIDGES ON THE LONGFORD DEVIATION

With the completion of the South Esk Flood Openings Nos 1 and 2, and Back Creek Bridge during the later half of the year, and the earlier completion of the South Esk River Bridge, this brought to an end the construction of bridges on this deviation which started in August 1977.

HILTON ROAD OVERPASS

This two span bridge was completed in April 1983.

MACKINTOSH RIVER BRIDGE

Construction of this three span, 60 metre long two lane bridge commenced in April 1981 and was opened to traffic at the end of 1982. Because of the depth of the narrow river gorge at this site, it was necessary to stabilise the rock face in order to protect a pier and an abutment foundation.

WESTBURY ROAD OVERPASS

This two span bridge was completed and opened to traffic towards the end of 1982 following an acceleration of the works programme in order to shorten the period of the deviation on this main western outlet from Launceston.

WIVENHOE RAIL UNDERPASS

This bridge was completed early in the year and opened to traffic.

BROOKER AVENUE — TRAFFIC MEDIAN BARRIERS

Whilst small lengths of New Jersey barrier had previously been constructed as protection for bridge piers, this was the first project in the State where extensive use of precast barrier units has been carried out. Some 191 units were placed in the existing median of the Brooker Avenue between Clearys Gates and Risdon Road.

LAKE HIGHWAY — DEVIATIONS AT GREAT LAKE

A total of 8 km of new unsealed road construction was completed during the year. The completed work contains causeways at Doctors Creek, Pine Tree Rivulet and Brandums Creek.

MIDLAND HIGHWAY**Stonor Rise to Oatlands**

Reconstruction was completed.

Black Snake Interchange

The construction of the main carriageway and interchange at Black Snake Lane was completed and opened to traffic on 21 June 1983.

HOBART NORTHERN OUTLET ROAD**Claremont Link Road to Granton**

This section of road from the Claremont Interchange to Granton was opened to traffic on 21 June 1983.

TOURIST ROAD IMPROVEMENTS

The Commonwealth Government provided a special grant of \$10m for the upgrading and improvement of specific roads throughout the State which are tourist orientated.

Several roads were selected for full reconstruction because of their poor condition and alignment. Other roads required improvements to drainage and surface shape and these were undertaken with asphalt overlays after pavement improvements and repairs were carried out.

The funds were expended on the following projects:—

ARTHUR HIGHWAY

Forcett to 2.3 km south of Copping (21.44 km) — Drainage and pavement repairs with asphalt overlay.

TASMAN HIGHWAY

Buckland to 0.4 km north of Tea Tree Rivulet (6.20 km) — Pavement repair and asphalt overlay.

M1 Road to Trehawke Creek (9.35 km) — Pavement repair and asphalt overlay.

Trehawke Creek to South Horseshoe Bend Deviation (6.03 km) — Drainage, pavement repair and asphalt overlay.

North End of Horseshoe Bend Deviation to Stony River (11.10 km) — Drainage, pavement repair and asphalt overlay.

1.3 km South of Coles Bay to Bicheno (12.7 km) — Pavement repair and asphalt overlay.
Naroo Street Waverley for 7.3 km towards Nunamara — Alignment improvements and strengthening.

St Leonards Road Junction to Craig Street (500 m) — Alignment improvements and strengthening was carried out by the St Leonards Council.

FENTON MAIN ROAD

West of Styx River (6.6 km) — Drainage and pavement repair.

East of Karanja (1.45 km) — Asphalt overlay.

2.1 km North of Styx River (0.5 km) — Pavement repair and stabilisation.

Glenora to Westerway (4.6 km) — Granular pavement strengthening.

LAKE LEAKE MAIN ROAD

Campbell Town 13.8 km to 26.3 km — Drainage, earthworks, prime and seal.

CRADLE MOUNTAIN TOURIST ROAD

Drainage and earthworks completed, with pavement being reconstructed.

HASTINGS CAVES TOURIST ROAD (4.2 km)

Reconstruction has been virtually completed from the junction of the Huon Highway to the junction of the Lune River Road, with sealing to follow.

MAJOR WORKS IN PROGRESS

BOWEN BRIDGE

Substantial progress was made on construction of the Bowen Bridge across the Derwent River during the year and it is anticipated that construction will be completed by early 1984. The bridge which is approximately one kilometre in length will provide four traffic lanes and two walkways. The last of the massive bridge caissons was constructed founded on bedrock nearly 50 metres below water level. All piers were completed to a stage to receive the bridge superstructure.

Precasting of the required 594 superstructure box segments was finished during the year and 533 of these units, each of mass of up to 70 tonnes, were assembled on the bridge structure. The segments forming the last two 109 metre spans were being placed on Pier 2 during June.

Work on the road approaches between Shones Corner on the Eastern Shore and the Brooker Highway on the Western Shore was nearing completion.

CLYDE RIVER BRIDGE

At the end of the year the substructure had been completed, all beams had been erected and approximately 40 per cent of the deck and kerbs completed. It is expected to be completed by December 1983.

LAUNCESTON SOUTHERN OUTLET

Glen Dhu Overpass

Construction of this two span bridge commenced in June 1983. At the end of the year the pier footings had been completed and preparations were in hand to start piling the abutments.

Mount Pleasant Underpass

Work on this two span bridge started in August 1982 and at the end of the year all substructure work had been completed. The underpass is due for completion by the end of November 1983.

Shamrock Street to Strathroy

Drainage and earthworks have been substantially completed with pavement work programmed to commence in October 1983.

INGLIS RIVER BRIDGE

Work continued during the year. The Southern mass concrete abutment has been completed, together with the two piers which are founded on piles. Seven of the prestressed concrete beams have been cast, together with the bulk of the precast deck panels.

Construction of the northern abutment has been delayed by unusual foundation conditions. This has resulted in the abutment being redesigned. It is expected the bridge will be completed early in 1984.

BASS HIGHWAY**Old Surrey Road to Chasm Creek**

The Chasm Creek railway relocation was completed together with the bulk of service relocations.

Construction of the new westbound carriageway from Clark Street to the Wivenhoe Showgrounds was also completed with asphalt being laid in March 1983.

The eastbound carriageway was also completed and asphalt laid from Natone Road junction to Round Hill.

Construction of the service road from Dedham Street to River Road commenced following the completion of property acquisitions.

A new junction at Natone Road was opened to traffic to facilitate traffic movements in the area. Earthworks and part of the pavement works were started on the eastbound carriageway west of the Emu River Bridge.

The whole of the project is expected to be completed in 1983-84.

Wynyard to Boat Harbour

Reconstruction of 8 km between Flowerdale Junction and Cassidys Bog was substantially completed. A temporary primer seal was placed on 2.5 km and the final seal will be completed in November 1983. Two climbing lanes of 1.5 and 0.6 km were provided and major improvements made to junctions at Tollymore Road and Port Road.

BRIDPORT MAIN ROAD

A further 7.0 km section between Pipers River and Lebrina turnoff has been strengthened and resealed.

BRUNY MAIN ROAD

Reconstruction was continued by the Bruny Municipal Council from north of Adventure Bay to the beach and 1.04 km was completed to sub-base stage.

COLES BAY TOURIST ROAD

Reconstruction and gravelling was carried out on a 3 km section from the intersection with the Esplanade at Coles Bay. Work is proceeding on the construction of two large culverts.

ILLAWARRA MAIN ROAD — DEVIATION AT LONGFORD

The section from 'Mountford' gates to Bishopsbourne Road has been sealed and work is progressing on traffic islands and road safety fencing.

Reconstruction of the section from 'Mountford' gates to Illawarra Main Road commenced in March. By 30 June all gravelling and 80 per cent of the seal had been completed.

LAKE LEAKE MAIN ROAD

Earthworks, drainage and gravelling was completed for the section Campbell Town C 13.5 to C 25.2 with 7 km being sealed. A further length of approximately 1 km at each end of this road was sealed by the Campbell Town and Glamorgan Councils.

MATHINNA SECONDARY ROAD

Reconstruction continued with earthworks and gravelling being completed to F 20.0 km. A further 3.4 km was sealed.

TASMAN HIGHWAY**Freestone Point to Little Swanport**

The section from Ashgrove Hill to Rocky Waterhole was completed. Widening and strengthening of the pavement with improved drainage was carried out north of Rocky Waterhole and widening prior to strengthening was also carried out south of Ravensdale Rivulet.

Horseshoe Bend Deviation — Bridge Approaches

The deviation was completed to primer seal stage and the final seal will be placed in 1983–84.

Scottsdale to Ringarooma Road

Work continued on this project which has now been completed to L 80.8 km. In addition earthworks and gravelling is underway to L 84.4 (Ringarooma Road Junction).

ROAD MAINTENANCE

The Department has been able to maintain the classified system in a generally satisfactory condition despite the decrease of available funds in real terms. Mild climatic conditions resulted in reduced expenditure on emergency situations (and enhanced the overall maintenance programme).

The projects carried out in lieu under Callaghan and A.B.R.D. fundings has eased the expenditure on sealed pavement maintenance.

BITUMINOUS SURFACING

Details of the bituminous works undertaken are shown in Annexure C.

BRIDGE MAINTENANCE**BRIDGEWATER BRIDGE**

Construction of new protective fendering to the navigation channel was completed during the year, and steelwork on the two westernmost approach spans, including the railway bridge, was repainted. Remaining steelwork will be progressively repainted over a period of several years.

The pavement surfacing on the deck of the liftspan has deteriorated to the extent that patching is no longer practicable. Plans are now in hand to provide a new seal to the deck in the coming summer.

Liftspan openings for the year amounted to 791. These included —

Newsprint vessels	....	....	....	....	....	....	....	654
Ferry and cruise boats	....	....	....	....	....	....	....	22
Private craft	....	....	....	....	....	....	....	75
Maintenance Lifts	....	....	....	....	....	....	....	40

and represents an increase of 79 over the previous year.

TASMAN BRIDGE

Measures have been taken during the year to improve the drainage on the eastern approach viaduct. These included the construction of an interceptor across the two downstream lanes, and changes to the system of collection piping from the scuppers in order to minimise blockages. All parts of the deck surface are now considered to be adequately drained.

During the year, two meetings of the Tasman Bridge Liaison Committee were held. This interdepartmental Committee, on which the Department of Main Roads is represented, has the task of providing advice to the Government on appropriate safety measures and on means of minimising the possibility of future ship impact with the bridge. Most of the Committee's activity to date has been concerned with the matter of pilotage of vessels through the bridge.

DENISON CANAL BRIDGE

During the year a short length of timber piled retaining wall was constructed adjacent to the Hobart abutment to control an area of localised settlement in the canal bank, and a start was made on repainting the superstructure steelwork.

Vessels passing through the canal during 1982-83 amounted to 1 186, a slight decrease on the previous year.

JETTIES, SLIPWAYS AND FISHING FACILITIES

BRUNY ISLAND FERRY TERMINALS

Approximately \$17 000 was expended on general maintenance of berths and repairs to the Barnes Bay and Kettering Terminals. These repairs were necessary in order to keep the terminals useable until the new terminals at Kettering and Roberts Point were operable.

FERRY TERMINALS AT KETTERING AND ROBERTS POINT

Both the Kettering and Roberts Point terminals were completed in early 1983 but were not put into use until 4 June 1983, because of problems in the electrical supply to the Roberts Point ramp necessitating the provision of a 3-phase power supply.

NARACOOPA JETTY, KING ISLAND

An inspection into the condition of this structure was carried out in January 1982. This inspection revealed fairly extensive general deterioration and to the substructure in particular. Repairs were accordingly put in hand. These repairs were commenced in 1981-82 and completed in 1982-83 at a total cost of \$57 000.

DOVER JETTY

An extension to provide more berthing space for the fishing vessels at Dover was completed. By reducing the width of the extension over that originally proposed it was found possible to provide a total length of extension of approximately 57 metres. New lighting, power and water supply have also been provided. Total cost of all works was \$97 000 of which \$26 000 was expended in 1982-83.

MARGATE JETTY

An extension of length of 30 metres with a reduced width was completed in lieu of the 14 metre extension of full width originally proposed. This is a marked improvement on the berthing space formerly available at this jetty. Cost of this work was \$57 000. Repairs to the existing structure (mainly decking replacement) was also undertaken at a cost of \$12 600.

STANLEY FISHERMEN'S DOCK

Replacement of a number of badly corroded steel crossheads together with general repairs to the berths was completed at a cost of approximately \$9 000. Total costs of work at this dock during 1981-82 and 1982-83 was \$17 000.

DARLINGTON JETTY

The repair of the masonry abutment was completed, general repairs to jetty structure were undertaken and a new low landing stage was constructed. Cost of this work was \$10 300.

STANLEY OLD WHARF

The walls of this structure were stabilised by placing a section of armour stone on the outside. Total cost of this work was \$7 000 shared equally with the Circular Head Marine Board.

BICHENO SLIPWAY

A design and drawings were prepared for two new slipway carriages and cradle arms for the larger slipway at Bicheno. These were constructed and installed at a cost of \$28 000.

INVESTIGATIONS AND MATERIALS TESTING

Route feasibility and design investigations were carried out on the following projects:—

- Bellerive By-pass.
- Bass Highway Claytons Rivulet Deviation
- Lyell Highway Apple Pip Deviation.
- Algona Main Road.
- Burnie Freeway System Stage 'B' North Terrace.
- Georges Bay Training Wall.
- Hobart Southern Outlet.
- West Tamar Highway Cormiston Creek — Legana.

Investigations for foundations of fifteen bridge structures were carried out and also five building foundations were investigated on behalf of the Department of Construction.

LANDSCAPING

The Department's nursery provided 36 350 plants for landscaping of Road Reservations. Major projects were the completion of Ulverstone By-pass, Hobart Northern Outlet, East and West Tamar Highways at Launceston. Due to the scaling down of the Nursery, leading to its eventual removal, substantial quantities of plants were made available to National Parks and Wildlife Service, Lands Department, Forestry Department and Local Councils.

CONSTRUCTION PLANT AND WORKSHOPS**GENERAL**

The Plant Division, which incorporates the Workshops at Moonah, Launceston and Ulverstone, provides plant and workshop facilities for the Department's construction and maintenance activities on roads and bridges.

The income from Plant Hire amounted to \$8 967 350, an increase of 12 per cent over the previous year.

The amount of hire paid directly to outside owners and contractors amounted to approximately \$10.95 million.

PLANT OPERATIONS

An amount of \$1.72 million was spent on the purchase of new equipment, mainly the replacement of graders, vibratory rollers, medium trucks and light vehicles.

TRAINING AND DRIVER TESTING

During the year 146 people including 61 from other Departments were tested and issued with D.M.R. driving permits.

One day Defensive Driving Seminars were held at Moonah, Launceston and Ulverstone with a total attendance of 84.

VEHICLE ACCIDENTS

The frequency of vehicle accidents decreased during 1982-83 from 0.72 accidents per 100 000 km to 0.48 in the current year. Personal injury has been negligible and few accidents resulted in major damage.

APPRENTICES

Participation in the Hydro-Electric Commission's training scheme was again made available to first year metal trades apprentices from Moonah.

The number of apprentices currently undergoing training in the Department's workshops is fifty-four (54) made up as follows:—

Moonah	...	...	...	...	...	...	...	...	...	...	21
Launceston	...	...	...	...	...	...	...	...	...	...	16
Ulverstone	...	...	...	...	...	...	...	...	...	...	17
TOTAL	...	...	...	...	...	...	...	...	...	...	54

DEPOTS AND WORKSHOPS

The Workshop Production Account recorded an annual turnover of \$5.4 million.

Major works carried out during the year, apart from the main function of plant repairs, consisted of completion of steel fabrication for the Bruny Island Ferry Terminals, manufacture of piles for the Inglis River Bridge, fabrication of fencing for the Hilton Road Overpass and the manufacture and installation of cradles for the Bicheno Slipway.

Depot improvements included major alterations to the Plant Store's Office and Drawing Office at Moonah Depot and alterations to the Plant Inspectors's Office at Launceston Depot.

FINANCIAL STATEMENTS

The Plant Division accounting operates with an April to March financial year. The Division trading account is the Road Construction Plant Suspense Account which must be kept as required by section 6 of the Roads and Jetties Act 1935.

The Road Construction Plant Suspense Account financial statements for the period are reported in Annexure D.

ADMINISTRATION

GENERAL

The on-going constraints applied to obtaining replacement and/or additional staff, together with the growth in the real level of funding from the State Highways Trust Fund, has in some cases over-extended existing staff resources in coping with the demand for administrative services.

This increased funding has imposed an additional workload, particularly in the section concerned with property acquisition. The number and value of parcels of land required for Departmental works has grown significantly.

The growth arising from the policy of contracting out certain road and bridge works has placed additional strains on the small staff section available for this work.

STAFF

At 30 June 1983 there were 381 Public Service Act positions and 38 Public Works Construction Act positions on the Department's establishment and the actual number of staff employed was 362 Public Service Act staff and 38 Public Works Construction Act staff.

The composition of this staff was —

<i>Public Service Act Staff</i>	
Administrative Officers, Accountants and Clerical Staff	113
Professional Engineers	74
Surveyors	17
Scientific Officers, Technical Officers, Engineering Assistants and Technicians	67
Draftsmen	53
Typists and other Keyboard Classifications	29
Other Classifications	14
TOTAL PUBLIC SERVICE ACT STAFF	362
<i>Public Works Construction Act Staff</i>	
Survey Assistants	22
Plan Printers	3
Inspectors	9
Other Classifications	4
TOTAL PUBLIC WORKS CONSTRUCTION ACT STAFF	38

The distribution of staff to the various locations of the Department was as follows:—

<i>Public Service Act Staff</i>	
Head Office, Murray Street, Hobart	204
South-East District Office, Derwent Park	21
North-East District Office, Launceston	37
North-West District Office, Ulverstone	31
Central Workshops and Stores, Moonah	38
Materials and Research Laboratory, Derwent Park	24
Kirksway House, Battery Point	7
TOTAL	362
<i>Public Works Construction Act Staff</i>	
Head Office, Murray Street, Hobart	4
South-East District Office, Derwent Park	1
North-East District Office, Launceston	10
North-West District Office, Ulverstone	9
Central Workshops and Stores, Moonah	3
Materials and Research Laboratory, Derwent Park	3
Kirksway House, Battery Point	8
TOTAL	38

Senior Appointments during the year included —

Mr T. C. Fletcher was promoted to the position of Division Engineer;
 Mr R. A. Absolom was promoted to the position of Senior Technician;
 Mr G. Glass was appointed to the position of Accountant (Costing); and
 Mr D. Donovan was promoted to the position of Stores Supervisor.

The following long-serving officers retired or died during the year:—

Mr G. E. C. McKercher, Director — 36 years service;
 Mr J. Driscoll, District Engineer — 24 years service;
 Mr R. J. Smith, Engineer — 37 years service;
 Mr O. A. Wilson, Division Engineer — 22 years service;
 Mr F. N. Lakin, Division Engineer — 40 years service;

Mr P. M. E. O'Keefe, Stores Supervisor — 35 years service;
 Mr J. Eaton, Supervisor — 36 years service;
 Mr E. J. Oxley, Clerical Assistant (deceased) — 15 years service;
 Mr J. Hay, Senior Technician — 17 years service;
 Mr D. G. Snare, Clerk (deceased) — 26 years service;
 Mr R. N. Cash, Clerical Assistant — 30 years service; and
 Mr P. Willing, Clerk — 23 years service.

STUDY COURSES AND STAFF DEVELOPMENT

Including those officers studying work-related subjects in tertiary establishments there are a total of 23 persons receiving time off for study purposes.

At present there is one officer holding a University Scholarship at the Engineering Faculty.

A limited staff development programme was conducted during the year to complement the Expanded Public Service Board training programme. In addition a formally defined induction programme was conducted for young and new officers within the Department.

INDUSTRIAL

Wages remained static throughout the year as a result of the wage pause.

Departmental relationships with unions continued on a satisfactory plane although some concern was evident because of the projects being let to contract.

As at 30 June 1983 the number of employees engaged in workshop and field operations were —

Workshops and depots	....	....	....	....	....	....	....	....	233
Construction and maintenance of roads and bridges									862
TOTAL	....	....	....	....	....	....	....	....	1 095

Retirements for the year totalled forty-one and a number of these served the D.M.R. for many years. Notable retirements were —

Retirements: Age or Voluntary —

D. J. Purton, Foreman — 41 years service.
 T. H. Campbell, Foreman — 38 years service.
 K. H. Lynch, Leading Hand — 37 years service.
 D. W. Seaton, Labourer — 36 years service.
 M. W. Smith, Foreman — 36 years service.
 A. W. Evison, Foreman — 30 years service.
 C. R. G. McCallum, Labourer — 30 years service.
 C. R. Gardam, Labourer — 28 years service.
 I. E. Drake, Foreman — 27 years service.
 H. H. Shearing, Labourer — 26 years service.
 S. M. Gadsby, Foreman — 26 years service.
 G. T. Scott, Foreman — 23 years service.

Retirements Due to Ill Health —

E. N. Trail, Pipelayer — 32 years service.
 H. J. French, Plant Operator — 31 years service.
 S. M. Smith, Truck Driver — 29 years service.
 K. J. Direen, Labourer — 29 years service.
 C. Fullard, Truck Driver — 24 years service.
 R. L. Howell, Carpenter — 24 years service.

WORKERS' COMPENSATION

A number of common law claims resulting from work accidents have been referred to the Law Department for action, with some being for substantial amounts. Although the amount of money paid out for Workers' Compensation was less than the previous year, the increasing number of serious back complaints and common law actions gives cause for concern.

The following payments under the Workers' Compensation Act were made during the year:—

								\$
Weekly payments	....	....	....	....	....	....	....	160 154
Medical expenses	....	....	....	....	....	....	....	103 375
Lump sum settlements	....	....	....	....	....	....	....	26 690
								\$290 219

INDUSTRIAL SAFETY

The 'Accident Prevention Program' was continued throughout the Districts and Depots in the Department over the 1982-83 period.

First Aid courses were held during the year with some ninety members attending and gaining awards, ranging from the basic certificate to 'Medallion' and 'Voucher' levels.

The lost time accident rate for the Department again showed a downward trend with accidents reduced from 207 in 1981-82 to 168 for 1982-83. Five bridge gangs gained the 'National Safety Council of Australia, Safety Plaque'.

REHABILITATION

The Department's internal Rehabilitation Committee processed eight cases during the year with four employees being retired on the grounds of ill health, one returning to normal duty, two being referred for assessment and further treatment and one being referred to the Industrial Officer for assessment with reference to his job and work performance.

PROPERTY ACQUISITIONS

During 1982-83 a total of 211 acquisitions were completed, 206 were commenced and, at the end of the financial year, 306 acquisitions were in progress. Ninety-five of the acquisitions in progress were subject to compulsory process compared with 83 at the end of the previous year. Expenditure on property acquisitions for the year was \$6 141 663 compared with \$2 500 690 for the preceding year. Included in this total was an amount of \$2 923 813 for National Highway Projects.

The major areas of expenditure included the purchase of properties affected by the construction of the Launceston Southern Outlet Road, Burnie Expressway, Midland Highway, Bass Highway and Bowen Bridge Approaches. The reconstruction of the Huon Highway, Nubeena Secondary Road, Mole Creek Main Road and the Bass Highway at Boat Harbour resulted in many minor property acquisitions.

The purchase of properties in advance of requirements in Burnie and Launceston has continued and the Department now owns in excess of twenty properties in these areas which are let to private tenants until required for roadworks.

CONTRACTS

The following contracts were entered into during 1982-83:—

<i>Contract No.</i>	<i>Description</i>	<i>Contract Price</i>
<i>Commonwealth Funded Projects</i>		\$
R/SE-383	Purchase and Removal of Dwelling and Outbuilding at No. 6 Goodwood Road, Glenorchy	1 000-00
NH/R-004	Bass Highway — Launceston to Exton — Supply and Installation of Road (Guide) Signs	28 313-00
NH/R-013	Midland Highway — Stonor Road to Oatlands — Stage 1 — Pavement Construction and Associated Works	499 319-59
A/R-015	Lake Leake Main Road — Campbell Town — 13.5 — 25.2 km — Pavement Sealing and Associated Works	589 833-00
L/R-016	Hastings Caves Tourist Road — Reconstruction of Road between Huon Highway and Lune River Road	962 173-72
NH/M-017	Bass Highway — Devonport to Burnie — Supply and Lay Asphalt	135 707-00
NH/R-018	Midland Highway — Stonor Road to Oatlands — Stage 2 — Pavement Construction and Associated Works	441 579-49
A/R-019	Mole Creek Main Road — Deloraine to Needles — Reconstruction	1 968 274-00
A/R-020	Tasman Highway — Horseshoe Bend to Stony River — Supply and Lay Asphalt	513 175-20
A/R-021	Tasman Highway — Coles Bay Tourist Road to Bicheno — Supply and Lay Asphalt	425 713-00
A/R-022	Tasman Highway — Buckland to Tea Tree Rivulet — Supply and Lay Asphalt	249 565-00
A/R-023	Arthur Highway — Forcett to Tanners Creek — Supply and Lay Asphalt	440 229-40
L/R-024	Cradle Mountain Tourist Road — Cethana Tourist Road to 5.8 km South — Reconstruction	287 674-80
A/R-027	Tasman Highway — M1 Road to Trehawke Creek — Supply and Lay Asphalt	445 870-90
A/R-028	Fenton Main Road — Karanja — Supply and Lay Asphalt	41 973-50
A/R-029	Arthur Highway — Tanners Creek to Copping — Supply and Lay Asphalt	333 386-40
NH/R-030	Bass Highway — Wivenhoe to Chasm Creek — Supply and Lay Asphalt	143 067-50
NH/R-031	Bass Highway — Exton to Burnie — Supply and Installation of Road (Guide) Signs	75 987-00
A/R-032	Fenton Main Road — Glenora to Westerway — Construction of Pavement and Associated Works	257 681-12
NH-A/R-033	Midland Highway and Mole Creek Main Road — Manufacture and Supply of Road Signs and Fittings	4 369-00
L/R-034	Cradle Mountain Tourist Road — Chainage 5 800 to Lehman's Creek — Reconstruction	295 618-00
A/R-035	Tasman Highway — Trehawke Creek to Horseshoe Bend — Supply and Lay Asphalt	342 570-85
NH/R-037	Bass Highway — Old Surrey Road to Chasm Creek — Supply and Lay Asphalt	98 740-00
R-N/R-039	Midland Highway — Norfolk Street Junction at Perth — Reconstruction	126 761-81
R-N/R-041	East Tamar Highway — Supply and Installation of Road (Guide) Signs — Launceston to Bell Bay	19 150-00
<i>State Government Funded Projects</i>		
B/SE-380	Purchase and Removal of Risdon Ferry 'Princess'	1 037-00
B/NE-382	Westbury Road Overpass, Launceston — Southern Outlet Road — Supply of Precast Paving Slabs	8 766-00
B/SE-384	Hilton Road Overpass, Hobart — Northern Outlet Road — Supply of Precast Paving Slabs	6 412-00
B/SE-385	Box Hill Road Overpass — Hobart Northern Outlet — Design, Supply and Installation of Ground Anchors	66 976-00
R/NW-386	Bass Highway, West of Smithton — Mile Post S10 — S13 — Supply and Lay Asphalt	59 249-00
R/NW-387	Bass Highway — Cooe to Wynyard — Supply and Lay Asphalt	125 805-08
R/SE-388	Brooker Highway Extension — Claremont to Granton — Supply and Lay Asphalt	237 725-03
P/SE-389	Tasman Bridge — Navigation and Feature Lighting, Signal Gantry Power Supply Maintenance	Schedule of Rates
R/SE-390	Tasman Highway — Nelson Creek Bridge Approaches — Supply and Lay Asphalt	48 185-40
R/SE-391	Lyell Highway — New Norfolk Bridge to First Rail Crossing — Supply and Lay Asphalt	95 181-10
R/SE-392	East Derwent Highway — Yolla Street to Beach Street — Supply and Lay Asphalt	63 411-20

AGREEMENTS

The following, simple Agreements for Works were entered into during 1982-83:—

				<i>Bridges</i>	<i>Sealing</i>	<i>Gravel</i>	<i>Others</i>	<i>Total</i>
North-West District	....	....	....	....	23	16	8	47
North-East District	....	....	....	5	5	13	16	39
South-East District	....	....	....	....	12	19	22	53
Head Office	....	....	....	6	....	1	7	14
TOTALS	....	....	....	11	40	49	53	153

STORES

The construction and plant stores requirements of the Department are managed through a decentralised stores system, with a principal store at the main workshop complex at Moonah and major branch stores at the District Offices in Launceston and Ulverstone.

The total value of stores issued during the year from the three centres was approximately \$1.5 million and the value of stores holdings at 30 June 1982 was \$941 084.

As from 12 June 1983, Plant Stores and Construction Stores were combined into a single system.

Contract orders placed direct by the Department's Stores Staff totalled 7 510, amounting to some thousands of individual items. As well price/availability checks for over 4 500 items were made.

The transfer of Plant Store items to the A.D.P. stores system was completed by October 1982.

ACKNOWLEDGEMENT

I express my appreciation to all the staff and employees of the Department for the manner in which they have responded to an abnormally heavy work load that arose during the financial year. Although staff numbers were down by a total of nine compared to the previous financial year, they successfully handled a budget 32.5 per cent larger in real money terms than the previous year.

While paying tribute to all sections of the Department, I would like particularly to mention the Property Section, which successfully dealt with an acquisition budget two and a half times greater than the previous year; its work was carried out with the minimum of dissatisfaction being expressed by vendors.

L. J. BAILY, Acting Director.

ANNEXURE A
LOAN FUND EXPENDITURE 1982-83

1981-82 \$		1982-83 \$
	<i>Roads and Bridges—</i>	
850 000	Access Road to Roberts Point Ferry Terminal ....	....
500 000	Tasman Highway, Scottsdale to Ringarooma Turnoff ....	....
500 000	Huon Highway, Huonville to Geeveston	973 500
589 000	Strahan-Zeehan Road	1 000 000
111 000	Refund to Consolidated Revenue for Administration ....	....
\$2 550 000	TOTAL (Roads and Bridges)	\$1 973 500
	<i>Other Works—</i>	
179 443	Launceston Flood Protection	275 000
99 988	Jetties and Facilities for Fishermen	238 130
987 929	Bruny Ferry Terminals—Construction	2 482 842
\$1 267 360	TOTAL (Other Works)	\$2 995 972
\$3 817 360	TOTAL (All Works)	\$4 969 472

ANNEXURE B
FINANCIAL ASSISTANCE TO LOCAL GOVERNMENT AUTHORITIES

1981-82 \$		1982-83 \$
	<i>Direct Grants—</i>	
612 694	Arterial Roads—Construction	1 885 214
....	Maintenance	150 000
4 113 244	Local Roads—Construction	5 827 159
2 121 697	Maintenance	2 428 505
\$6 847 635	TOTAL	\$10 290 878
	<i>Work on Council Roads Financed and Carried out by D.M.R.—</i>	
1 846 550	Repair and Renewal of Bridges	2 203 383
362 835	Roadworks	386 828
\$9 057 020	TOTAL	\$12 881 089

ANNEXURE C
BITUMINOUS SURFACING COMPLETED 1982-83 (km)

										Hot Bitumen Sprayed Seal					
Road										Prime and Seal	Primer Seal	Winter Seal	Flush Reseal	Asphalt	Total
South-East District —															
Arthur Highway										....	1.20	....	3.25	21.44	25.89
Brooker Highway										....	....	....	....	6.39	6.39
Channel Highway										....	1.16	....	16.85	....	18.01
East Derwent Highway										....	....	....	....	1.61	1.61
Huon Highway										....	2.88	....	6.82	....	9.70
Lyell Highway										....	2.30	....	14.57	1.13	18.00
Midland Highway										....	3.87	....	4.10	5.48	13.45
Tasman Highway										....	4.07	....	4.50	33.47	42.04
Colebrook Main Road										....	....	....	9.18	....	9.18
Fenton Main Road										....	....	....	....	1.45	1.45
Elderslie Main Road										....	....	....	....	0.04	0.04
Nubeena Secondary Road										....	....	....	12.57	....	12.57
Ranelagh Secondary Road										....	0.50	....	....	0.05	0.55
North-West District															
Bass Highway										5.00	....	....	5.54	10.42	20.96
Lake Highway										0.38	....	....	....	....	0.38
Lyell Highway										2.03	....	....	....	....	2.03
Murchison Highway										1.44	....	....	24.43	0.69	26.56
Kindred Main Road										....	....	....	3.96	....	3.96
King Island Main Road										....	....	....	3.12	....	3.12
Port Sorell Main Road										....	....	....	12.72	....	12.72
Cradle Mountain Tourist Road										....	....	....	2.81	....	2.81
North-East District															
Bass Highway										....	....	....	9.60	....	9.60
East Tamar Highway										....	....	....	....	2.00	2.00
Midland Highway										....	....	....	4.10	2.23	6.33
Tasman Highway										....	....	7.93	6.10	27.25	41.28
West Tamar Highway										....	....	....	0.34	0.96	1.30
Bridport Main Road										....	....	7.00	9.75	....	16.75
Esk Main Road										....	....	....	2.14	....	2.14
Evandale Main Road										....	....	....	7.01	....	7.01
Illawarra Main Road										2.70	....	....	....	1.40	4.10
Lake Leake Main Road										3.37	7.20	....	....	....	10.57
Poatina Main Road										0.30	....	....	....	2.85	3.13
Ringarooma Main Road										....	....	....	7.50	....	7.50
Mathinna Secondary Road										3.37	....	....	....	....	3.37
Pipers River Secondary Road										....	....	....	....	2.11	2.11
Winnaleah Secondary Road										....	....	....	1.61	....	1.61
TOTALS										18.59	23.18	14.93	172.57	120.97	350.24

In addition to the above the following works were also carried out by the Department on Classified and Unclassified Roads. In some cases because of various pavement widths, junction areas, etc., quantities are shown rather than lengths:—

Bass Highway — Chasm Creek to Old Surrey Road — 43 227 m² Prime and Seal.

Bass Highway — Chasm Creek to Old Surrey Road — 3 642 Tonnes Asphalt.

Goodwood Main Road — 1.64 km Asphalt.

Pieman River Power Development (for H.E.C.) — 9.74 km Flush Reseal.

ANNEXURE D
ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1982-83
INCOME AND EXPENDITURE STATEMENT

Period Ending 20.3.82 \$		Period Ending 19.3.83 \$
	<i>Income —</i>	
	<i>Earnings —</i>	
7 995 998	Plant Hire	8 791 983
5 300 650	Workshop Charges	5 361 056
134 104	Other Income	179 250
86 678	Net Profit on Sale of Plant and Stores and Stocktaking Adjustments	87 161
<u>\$13 517 430</u>	TOTAL	<u>\$14 419 450</u>
	<i>Expenditure —</i>	
5 757 835	Plant Operation and Maintenance	6 460 621
5 115 810	Workshop Operations	5 261 947
982 400	Plant Depot Administration and Maintenance	1 272 399
1 177 339	Provision for Depreciation of Plant, Equipment and Buildings	1 122 518
1 356	Net Loss on Sale and Write-off of Plant Stores and Stocktaking Adjustments	402
15 000	Provision for Insurances	...
<u>13 049 740</u>		<u>14 117 887</u>
467 690	Excess of Income over Expenditure for Period	301 563
<u>\$13 517 430</u>	TOTAL	<u>\$14 419 450</u>

ROAD CONSTRUCTION PLANT SUSPENSE ACCOUNT 1982-83
Balance Sheet as at 19 March 1983

1982 \$		1983 \$
	NATURE AND SOURCE OF FUNDS USED —	
	<i>Funds provided by State Treasurer —</i>	
	Valuation of Plant and Equipment held at 30 June 1945 and Stock on Hand held at 30 June 1946	
194 607	Loan Funds	194 607
3 140 730	Commonwealth Grant	3 140 730
6 769	State Highways Trust Fund	6 769
326 897	General Reserve for Increased Cost of Plant Replacement	326 897
2 569 279	Accumulation Account	2 564 788
1 506 364	<i>Current Liabilities —</i>	1 812 418
88 693	Sundry Creditors (Store)	98 238
473 543	Accrued Expenses	336 725
	<i>Provisions —</i>	
2 837	Motor Vehicle Insurance	10 425
4 103	Plant Accident Insurance	4 056
<u>\$8 313 822</u>		<u>\$8 495 653</u>
	THESE FUNDS ARE REPRESENTED BY—	
	<i>Current Assets —</i>	
333 822	Cash at Treasury	252 446
371 543	Stock on Hand	443 371
70 591	Work in Progress — Deferred Charges	121 280
1 122 320	Accrued Charges — Plant Hire	946 754
97 857	Stores Issues	87 181
473 429	Workshops	393 748
1 875	Apprentice Tool Kits	2 600
<u>2 471 437</u>		<u>2 247 380</u>
	<i>Fixed Assets—</i>	
15 056 398	Land, Buildings, Plant and Equipment at cost	16 166 804
(9 214 013)	Less Provision for Depreciation	(9 918 531)
<u>\$8 313 822</u>		<u>\$8 495 653</u>

STATEMENT OF SOURCE AND APPLICATION OF FUNDS

1982 \$		1983 \$
<i>Source of Funds—</i>		
467 689	Profit from Operations	301 563
1 177 338	Add Non-Cash Item Depreciation	1 122 518
1 645 027		1 424 081
86 638	Less Profit on Sale of Plant Less Costs	85 560
1 558 389		1 338 521
....	Decrease in Working Capital	96 783
1 909	Increase in Plant Accident Insurance Provision	....
....	Increase in Motor Vehicle Insurance Provision	7 588
322 870	Proceeds from Sale of Plant	340 010
\$1 883 168		\$1 782 902
<i>Application of Funds—</i>		
807 785	Increase in Working Capital	....
....	Decrease in Plant Accident Insurance Provision	47
7 540	Decrease in Motor Vehicle Insurance Provision	....
11 585	Improvements to Depots	23 050
73 619	Purchase of New Plant	95 152
976 124	Purchase of Replacement Plant	1 629 127
6 515	Purchase of Workshop Equipment and Tools	35 526
\$1 883 168		\$1 782 902